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UK Undergraduate Research Program

The UK Undergraduate Research Program (UKURP) provides undergraduates, especially first- and second-year students, with the opportunity to identify and connect with faculty members who are seeking undergraduates to work with them on their scholarly projects. Projects are available in all disciplines and require varying levels of experience and sophistication. More information is available at <<http://www.uky.edu/EUREKA/UKURP/index.php>>.

Students who are actively engaged in a mentored scholarly research project through UKURP and who are spending an average of approximately ten hours per week on that project are eligible to register for a research methods course taught each spring. The final project in that course is for the student to prepare an abstract of his or her research. The following are samples of those abstracts from the spring semester, 2006, class.

Determining the Effects of Race and Gender on the Persuasive Power of Confrontation

Kathryn Braun

Faculty Mentor: Margo J. Monteith, Professor, Department of Psychology



Although the extent of explicit prejudice and overt acts of discrimination toward members of minority groups has decreased over the last few decades, subtle, implicit biases still remain deeply imbedded in our subconscious. An explicit prejudice is an opinion of a group of people that is openly expressed by the individual who holds the attitude; an implicit bias is a preference or inclination that is expressed without a conscious effort or intention by the individual. For social psychologists, the prejudices and biases studied are mostly negative ones held against groups to which an individual does not belong. Many social psychologists are focusing their research on creating and implementing techniques to get at the biases that individuals are unaware they hold, in order to reduce them. In Dr. Margo Monteith's lab, the effectiveness of confrontation as a tool to reduce bias has been explored in various ways. In these studies, a confrontation is constructed by creating a situation in which participants' prejudiced responses

are recognized by others and then pointed out to the participants who gave them.

The study in which I am currently involved attempts to tease apart the effects of race and gender on the persuasiveness of a confronter. My role in this experiment has been to elaborate upon the materials used in a similar experiment to fit the current research question and to administer the experiment to participants. Through the use of manipulated editorials given to participants, and questionnaires that record the participants' reactions, we hope to understand what characteristics make the most persuasive confronter. Each editorial's narrative provides a confrontation in which the reader is told he/she is the reason why racial or gender prejudices still exist. Different participants in this study were given different editorials. Specifically, the pictured author is varied so that participants believe the author of the editorial is a white male, white female, black male, or black female. Participants' responses will be evaluated to see if the race and/or gender of the pictured individual affected the effectiveness of the confrontation.

The results will likely illustrate that being a member of a target (minority) group reduces the effectiveness of the confrontation, and the individual providing the confrontation will likely be dismissed as a complainer. Several studies have illustrated this effect in the past, but this study further explores whether belonging to the specific target group being discriminated against or discussed is the cause for the reduced persuasiveness. At the conclusion of the data analysis, we may see that being a member of any target group reduces persuasiveness. For example, a white female may be viewed as less persuasive than a white male even when the white female is confronting about racial discrimination, an issue that she does not have a personal stake in because she is not black. With the results of this study, we hope to be able to establish an effective model for confrontations by any individual, in the hope of someday reducing the expression of prejudice no matter how subtle or subconsciously rooted.

Hypertension

Casaundra Cox

Mentor: Jeffrey Osborn, Professor, Department of Biological Sciences

Hypertension, or high blood pressure, is a common and potentially harmful condition among people today. As a lab assistant, I am studying hypertension in rats. The rats are on different sodium diets to show the effects of high and low sodium intake. After a few weeks, the kidneys of some of the rats are bilaterally denervated. In this process, all the nerves connected to the main artery to the kidney are removed in hopes to reduce blood pressure. We perform a sham procedure on the control group, which consists of opening and exposing the organ,



Casaundra Cox with her Undergraduate Showcase of Scholars Poster

leaving it exposed for approximately the same amount of time as the denervation, and suturing it back up. This procedure is used in order to show that it was not the exposure of the kidney that led to reduced blood pressure, but the actual denervation itself. After the denervations, the blood pressures are monitored on both denervated and sham rats. Furthermore, the rat's hypothalamus gland will be extracted and tested to see if anything else was affected. Data from this experiment is still being collected.

The research that I participated in last year was a magnificent experience. The lab experience taught me the importance research has in developing improvements in patients with hypertension. I have learned a great deal about how research is performed in a laboratory setting. My previous lab experience was non-existent. Dr. Jeff Osborn took me under his wing as a new student. He helped me understand biology concepts and how the kidneys affect hypertension, through our research performed on lab rats. The people in the lab were so helpful in assisting me with the daily protocols such as obtaining blood pressures, and pre- and post-surgical procedures.

I feel this experience will be one that I will cherish for the rest of my life. I have developed skills, friends, and knowledge through this program. I believe this would not have been possible without the assistance of AMSTEMM, Dr. Osborn, the graduate students, and Dr. Tannenbaum. Every student should have the opportunity to participate in one form of research. The knowledge you obtain will assist in your career path. Trust me you will not regret it.

Does Accounting Work Experience Affect Students' Goals and Attitudes Toward Money?

Brandon Edwards

Faculty Mentor: Dan Stone, Gatton Endowed Chair, School of Accountancy

Work experience often changes young adults. It is a chance to grow intellectually and professionally. In college, many students gain career oriented work experience through internships. My research along with Prof. Dan Stone involved exploring a few of the many changes that young adults undergo during internship. Our focus during the course of this study was accounting internships and do they change a student's goals and attitudes toward money.

We predicted that after accounting students finished an internship they would perceive money as more important than they did prior to internship. We made this prediction based on the fact that many people enter the accounting profession because accountants are paid well. That being said, we can assume that once they receive temporary financial rewards, i.e., internship, they will continue to desire more money. We also predicted that accounting students' goals would decrease. These goals were all related to self-acceptance, self-affiliation, and community. We thought that these goals would decrease because increasing extrinsic goals, i.e., the desire to gain wealth, often negatively affect intrinsic goals, i.e., attainment of things that hold no monetary values.



We collected data using a survey asking a series of questions concerning the student's goals, the likelihood of obtaining those goals, and financial measures. Each of the main concerns of study were given as sub-categories. Student goals and the likelihood of obtaining those goals were given the following sub-categories: self-acceptance, self-affiliation, community, and financial. Financial measures had a different set of categories: perception of money as power, financial anxiety, financial self-efficacy — the belief that one can manage her or his money efficiently — and materialism. For each sub-category, there was a group of questions that measured these categories. We administered surveys before and after internship. Both surveys contained the same questions measuring the same categories previously mentioned. Each item on the survey asked the student to measure a statement using a scale from one to ten, with one equaling absolutely disagree and ten equaling absolutely agree. We then used t-tests to analyze the statistical data.

At the conclusion of the study, the evidence suggests that there is no change in the students' attitudes toward money or their goals. However, the sample size for this study was fairly small. The results could be possibly differ if we used a larger sample size.

A New Mouse Model to Study Gene Function in Adult Skeletal Muscle

Peter S. Wulff

Mentor: Karyn Esser, Associate Professor, Department of Physiology

For an abstract of Peter's research, see his report under Summer Research and Creativity Awards on page 99.

